UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

24/JUL/2009

MEMORANDUM

Subject:	Name of Pesticide Product:	SHARPEN™ powered by KIXOR® Herbicide
	EPA File Symbol:	7969-ETI
	DP Barcode:	D349944
	Decision No.:	389169
	Action Code:	R010.0
	PC Code:	118203 BAS 800 H (Saflufenacil)

From: Rick J. Whiting, Biologist
Technical Review Branch (TRB)
Registration Division (7505P)

To: Kathryn Montague / Joanne Miller, RM Team 23
Herbicide Branch
Registration Division (7505P)

Applicant: BASF Corporation
Agricultural Products
P.O. Box 13528
Research Triangle Park, NC 27709-3528

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt
118203 BAS 800 H (Saflufenacil) [CAS No. 372137-35-4]	29.74
Inert Ingredient(s):	70.26
Total:	100.00%

ACTION REQUESTED: The Risk Manager requests: "This bean is for the acute tox review for BAS 804 00 H "FiRo" herbicide, containing the new a.i. BAS 800 H, "Saflufenacil." This is a trilateral review with Canada and Australia."

BACKGROUND: BASF Corporation has submitted six acute toxicity studies, a Basic CSF dated December 6, 2007 and a proposed label to support the registration of SHARPEN™ powered by KIXOR® Herbicide (previously named BAS 804 00 H FiRoCrop Herbicide), EPA File Symbol 7969-ETI. The acute oral and dermal studies were conducted at Austrian Research Centers GmbH – ARC and assigned MRID numbers 47128406 and 47128407. The acute inhalation study, primary eye and dermal irritation studies and the dermal sensitization study were conducted at Experimental Toxicology and Ecology and assigned MRID numbers 471284-08 thru -11. An Agency contractor, Oak Ridge National Laboratory, conducted the primary review of the studies. TRB performed the secondary review and made changes as necessary.

COMMENTS AND RECOMMENDATIONS:

1. The six studies have been reviewed and classified as acceptable.

2. The acute toxicity profile for SHARPEN™ powered by KIXOR® Herbicide, EPA File Symbol 7969-ETI, is as follows:

Acute oral toxicity	III	Acceptable	MRID 47128406
Acute dermal toxicity	IV	Acceptable	MRID 47128407
Acute inhalation toxicity	IV	Acceptable	MRID 47128408
Primary eye irritation	III	Acceptable	MRID 47128409
Primary skin irritation	IV	Acceptable	MRID 47128410
Dermal sensitization	Negative	Acceptable	MRID 47128411

3. Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

PRODUCT ID #: 007969-00278

PRODUCT NAME: SHARPEN™ powered by KIXOR® Herbicide

PRECAUTIONARY STATEMENTS

SIGNAL WORD: CAUTION

Hazards to Humans and Domestic Animals:

Harmful if swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eyewear. Wear: Long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves (such as Natural Rubber, Selection Category A).

*[Protective eyewear may be specified, if appropriate]

First Aid:

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

4. In addition, TRB noted that the registrant has included additional First Aid statements. TRB finds this additional labelling information acceptable.

5. The Basic Formulation CSF (dated December 6, 2007) for the proposed product should also be reviewed and accepted by the TRB Chemistry Team.

DATA EVALUATION RECORD

BENZAMIDE, 2-CHLORO-5-[3,6-DIHYDRO-3-METHYL-2,6-DIOXO-4-(TRIFLUOROMETHYL)-1(2H)- PYRIMIDINYL] -4-FLUORO-N-[[METHYL(1-METHYLETHYL)α-

(BAS 800 04 H)

STUDY TYPE: ACUTE ORAL TOXICITY - RAT [OPPTS 870.1100; OECD 423]
ACUTE DERMAL TOXICITY - RAT [OPPTS 870.1200; OECD 402]
ACUTE INHALATION TOXICITY - RAT [OPPTS 870.1300; OECD 403]
ACUTE EYE IRRITATION - RABBIT [OPPTS 870.2400; OECD 405]
ACUTE DERMAL IRRITATION - RABBIT [OPPTS 870.2500; OECD 404]
DERMAL SENSITIZATION - GUINEA PIG [OPPTS 870.2600; OECD 406]

MRID 47128406, 47128407, 47128408, 47128409, 47128410, and 47128411

Prepared for
Registration Division
Office of Pesticide Programs
U.S. Environmental Protection Agency
One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202

Prepared by
Toxicology and Hazard Assessment Group
Environmental Sciences Division
Oak Ridge National Laboratory
Oak Ridge, TN 37831
Task Order No. 1-26

Primary Reviewer:
Susan Chang, M.S.

Signature:
Date: JUL 10 2008

Secondary Reviewers:
Sylvia Milanez, Ph.D., D.A.B.T.

Signature:
Date: JUL 10 2008

Robert H. Ross, M.S., Group Leader

Signature: Robert H. Ross
Date: JUL 10 2008

Quality Assurance:
Lee Ann Wilson, M.A.

Signature: L.A. Wilson
Date: JUL 10 2008

Disclaimer

This review may have been altered subsequent to the contractor's signatures above.

Oak Ridge National Laboratory managed and operated by UT-Battelle, LLC., for the U.S. Department of Energy under Contract No. DE-AC05-00OR22725.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 20, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Acute Oral Toxicity – Rat; OPPTS 870.1100; OECD 423

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Wolf, T. (2007) BAS 800 04 H – Acute Oral Toxicity Study with Rats (Acute Toxic Class Method). Report Nos. 10A0175/069086 BAS21 and BASF Registration Document No. 2007/1044694. Austrian Research Centers GmbH – ARC, Toxicology, 2444 Seibersdorf, Austria. November 5, 2007. MRID 47128406.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In an acute oral toxicity study (MRID 47128406), six (three per group) fasted, young adult female Crl: (WI) BR rats (age: approximately 8 weeks; body weight: 183-188 g; source: Charles River Deutschland GmbH, D-97633 Sulzfeld) were given a single dose of BAS 800 04 H (348.4 g/L BAS 800 H; BASF – Test Substance No. 06/0175-1) as a dispersion in water at a dose of 2000 mg/kg bw by gavage. Body weights were determined before administration and on Days 7 and 14. The test animals were observed for mortality and signs of toxicity at 0.5, 1, 2, 3, 4 and 6 hours after dosing and at least once daily thereafter for up to 14 days. Gross necropsies were performed on all decedents and euthanized animals.

All animals survived the study and were normal and gained weight throughout the study. All animals were normal at the necropsy.

LD_{50} Females > 2000 mg/kg bw

Based on the LD_{50}, BAS 800 04 H is classified as EPA Toxicity Category III.

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute oral study (OPPTS 870.1100; OECD 423) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Animals were dosed as follows:

TABLE 1. Doses, mortality/animals treated

Dose (mg/kg)	Males	Females	Combined
2000	-	0/3	0/3
2000	-	0/3	0/3

Data taken from p. 18, MRID 47128406.

A. Mortality: All animals survived the study.

B. Clinical observations: All animals were normal and gained weight throughout the study.

C. Gross necropsy: All animals were normal at the necropsy.

D. Reviewer's conclusions: This reviewer agrees with the study author regarding the acute oral LD_{50}.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 20, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Acute Dermal Toxicity – Rat; OPPTS 870.1200; OECD 402

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Wolf, T. (2007) BAS 800 04 H – Acute Dermal Toxicity Study with Rats. Report Nos. 11A0175/069087 BAS22 and BASF Registration Document No. 2007/1044695. Austrian Research Centers GmbH – ARC, Toxicology, 2444 Seibersdorf, Austria. November 5, 2007. MRID 47128407.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In an acute dermal toxicity study (MRID 47128407), five male and five female young adult Crl: (WI) BR rats (age: males: approximately 8 weeks and females: approximately 12 weeks; body weight: males: 256-267 g and females: 209-233 g; source: Charles River Deutschland GmbH, D-97633 Sulzfeld) were dermally exposed for 24 hours on an area of approximately 10% of the total body surface area on the clipped dorsal trunk to 5000 mg/kg bw BAS 800 04 H (348.4 g/L BAS 800 H; BASF – Test Substance No. 06/0175-1) as received. The test material was applied on a cellulose patch soaked with deionized water and placed over the dose area at the dorsal thoracal region and secured with non-irritating tape and covered with semi-occlusive dressing. After the exposure period, residual test material was wiped off using wet cellulose tissue.

Body weights were determined before administration and on Days 7 and 14. The test animals were observed for mortality and signs of toxicity at 0.5, 1, 2, 3, 4 and 6 hours after dosing and at least once daily thereafter for up to 14 days. Gross necropsies were performed on all decedents and euthanized animals.

All animals survived the study. All animals were normal throughout the study. No dermal irritation was noted at the dose site. One female did not gain weight during the first week, but gained weight by the end of the study. All other animals gained weight throughout the study. All animals were normal at necropsy.

LD_{50} Males > 5000 mg/kg bw
LD_{50} Females > 5000 mg/kg bw
LD_{50} Combined > 5000 mg/kg bw

Based on the LD_{50}, BAS 800 04 H is classified as EPA Toxicity Category IV.

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute dermal study (OPPTS 870.1200; OECD 402) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Dose (mg/kg bw)	Mortality/Number Tested		
	Males	Females	Combined
5000	0/5	0/5	0/10

A. **Mortality:** All animals survived the study.

B. **Clinical observations:** All animals were normal throughout the study. No dermal irritation was noted at the dose site. One female did not gain weight during the first week, but gained weight by the end of the study. All other animals gained weight throughout the study.

C. **Gross necropsy:** All animals were normal at necropsy.

D. **Reviewer's conclusions:** This reviewer agrees with the study author regarding the acute dermal LD_{50}.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 20, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Acute Inhalation Toxicity – Rat; OPPTS 870.1300; OECD 403

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Ma-Hock, L. (2007) BAS 800 04 H – Acute Inhalation Toxicity Study in Wistar Rats. Report Nos. 13I0175/067017 and BASF Registration Document No. 2007/1057667. Austrian Research Centers GmbH – ARC, Toxicology, 2444 Seibersdorf, Austria. December 18, 2007. MRID 47128408.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In an acute inhalation toxicity study (MRID 47128408), five male and five female young adult Wistar HanRcc:WIST(SPF) rats (age: males: 7-8 weeks and females: approximately 10-11 weeks; body weight: males: 225.4-228.8 g and females: 198.1-200.4 g; source: RCC Ltd Laboratory Animal Services, Wölferstasse 4, CH-4414 Füllinsdorf, Switzerland) were exposed by nose-only inhalation to BAS 800 04 H aerosol (348.4 g/L BAS 800 H; BASF – Test Substance No. 06/0175-1) for 4 hours 10 minutes at a concentration of 5.5 mg/L. The animals were observed for 14 days. The MMAD was 3.8 and 3.2 µm and the GSD 2.4 and 2.5 at 30 minutes (or later) after the beginning of the exposure.

All animals survived, gained weight, and had increased respiration starting one hour after exposure with recovery by days 1, 2, 5, or 9, but persistence on two males and one female through day 14. No gross pathological abnormalities were noted in any animal at necropsy.

LC_{50} Males > 5.5 mg/L
LC_{50} Females > 5.5 mg/L
LC_{50} Combined > 5.5 mg/L

Based on the LC_{50}, BAS 800 04 H is classified as EPA Toxicity Category IV.

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute inhalation study (OPPTS 870.1300; OECD 403) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Nominal Conc. (mg/L)	Gravimetric Conc. (mg/L)	MMAD µm	GSD	Mortality/Number Tested		
				Males	Females	Combined
41.3	5.5	3.8, 3.2	2.4, 2.5	0/5	0/5	0/10

Test Atmosphere / Chamber Description: Two parts of the test material were mixed with one part highly deionized water to prepare the maximum concentration suitable for pumping and spraying. The mixture was stirred continuously to ensure the homogeneity during the whole aerosol generation process. The aerosol was produced by continuously pumping amounts of the test material preparation into the two-component atomizer. Using compressed air, the aerosol was generated with the atomizer inside the exposure system. Animals were restrained in glass tubes and their snouts projected into the inhalation system (INA 20, glass-steel construction, BASF Aktiengesellschaft).

Gravimetric Conc. (mg/L):	**5.5**
Chamber Volume (L):	**55**
Total Airflow (L/min):	**1.5 m^3/h**
Temperature	**19.8°C**
Relative Humidity	**76.4%**
Time to equilibrium:	**10 minutes**

Test atmosphere concentration: An GS 312 (DESAGA) air sampler was used to determine the concentration of the test material in the inhalation atmosphere. Four samples (5 L each) were tested every hour. A high performance liquid chromatography method was used to determine the aerosol concentration. For each sample the concentration was calculated in mg/L from the analytical determined mass values of the test material in the samples and the respective volume sampled from the inhalation atmosphere. The nominal concentration was calculated from the amount of material dosed and the supply air flow.

Particle size determination: Particle size for each exposure concentration was determined twice at the breathing zone of the animals using an impactor. The test material concentration collected at each stage was determined analytically using HPLC. The amounts of material adsorbed to the walls of the impactor and in the sampling probe (wall losses) were also determined quantitatively. The mass median aerodynamic diameter and geometric standard deviation were determined.

A. **Mortality:** All animals survived the study.

B. Clinical observations: All animals had increased respiration starting one hour after exposure with recovery by days 1, 2, 5, or 9, but persistence on two males and one female through day 14. All animals gained weight throughout the study.

C. Gross necropsy: No gross pathological abnormalities were noted in any animal at necropsy.

D. Reviewer's conclusions: This reviewer agrees with the study author regarding the acute inhalation LC_{50}.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 21, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Primary Eye Irritation – Rabbit; OPPTS 870.2400; OECD 405

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Landsiedel, R. (2007) BAS 800 04 H – Acute Eye Irritation in Rabbits. Report Nos. 11H0175/062291 and BASF Registration Document No. 2007/1053323. Experimental Toxicology and Ecology, BASF Aktiengesellschaft, 67056 Ludwigshafen, Germany. December 6, 2007. MRID 47128409.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In a primary eye irritation study (MRID 47128409), 0.1 mL of undiluted BAS 800 04 H (348.4 g/L BAS 800 H; Batch 403006, BASF – Test Substance No. 06/0175-1; pH ~7) was instilled into the conjunctival sac of the right eye of two male and one female young adult New Zealand White A 1077 INRA (SPF) rabbits (age: ~ 4 months; source: Centre Lago S.A., 01540 Vonnas, France). The untreated eye served as a control. About 24 hours after instillation of the test material the treated eye was rinsed with 3 to 6 mL of hand warm tap water for 1 to 2 minutes using a syringe with a blunt probe. Eyes were scored for ocular irritation 1, 24, 48, and 72 hours after instillation.

Corneal opacity and iritis were not noted on any rabbit during the study. Positive conjunctival irritation (redness, score 2) was noted on 3/3 rabbits one hour after test material instillation with clearance on two rabbits by 24 hours and on the third rabbit by 48 hours. Circular injected scleral vessels were noted in the animals during the study. The highest maximum mean total score was 8.0, recorded one hour after test material instillation.

In this study, the formulation was mildly irritating. BAS 800 04 H is classified as EPA Toxicity Category III for primary eye irritation.

This study is classified as Acceptable. It does satisfy the guideline requirements for a primary eye irritation study (OPPTS 870.2400; OECD 405) in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

	Number "positive"/Number treated			
	Hours			
Observations	1	24	48	72
Corneal Opacity	0/3	0/3	0/3	0/3
Iritis	0/3	0/3	0/3	0/3
Conjunctivae:				
Redness*	3/3	1/3	0/3	0/3
Chemosis*	0/3	0/3	0/3	0/3
Discharge**	0/3	0/3	0/3	0/3

* Score of 2 or more required to be considered "positive"
** Discharge is not a positive effect according to the grading scale

A. **Observations:** Corneal opacity and iritis were not noted on any rabbit during the study. Positive conjunctival irritation (redness, score 2) was noted on 3/3 rabbits one hour after test material instillation with clearance on two rabbits by 24 hours and on the third rabbit by 48 hours. Circular injected scleral vessels were noted in the animals during the study.

B. **Results:** BAS 800 04 H was mildly irritating. The highest maximum mean total score was 8.0 (calculated by the reviewer), recorded one hour after test material instillation.

C. **Reviewer's conclusions:** The study author stated that the test material "does not show an eye irritation potential under the test conditions chosen." This reviewer disagrees with the study author and classifies the test material as mildly irritating.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 21, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Primary Dermal Irritation – Rabbit; OPPTS 870.2500; OECD 404

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Landsiedel, R. (2007) BAS 800 04 H – Acute Dermal Irritation/Corrosion in Rabbits. Report Nos. 18H0175/062290 and BASF Registration Document No. 2007/1053325. Experimental Toxicology and Ecology, BASF Aktiengesellschaft, 67056 Ludwigshafen, Germany. December 6, 2007. MRID 47128410.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In a primary dermal irritation study (MRID 47128410), two male and one female young adult New Zealand White A 1077 INRA (SPF) rabbits (age: ~ 7 months; source: Centre Lago S.A., 01540 Vonnas, France) were dermally exposed to 0.5 mL of undiluted BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; pH ~7) for 4 hours on the clipped dorsolateral skin. The test material was applied on a test patch (2.5 cm x 2.5 cm) and placed on the application site. After the exposure period, any residual test material was removed with Lutrol® and Lutrol® / water (1 : 1). The animals were observed and irritation was scored at 1, 24, 48, and 72 hours after patch removal.

Well defined erythema (grade 2) was noted on 3/3 rabbits immediately after patch removal. Very slight erythema (grade 1) was noted on 2/3 rabbits one hour after patch removal with clearance on one rabbit by 24 hours and on another rabbit by 48 hours. Well defined erythema was noted on 1/3 rabbits one hour after patch removal with clearance by 24 hours.

In this study, the formulation was slightly irritating based on the Primary Irritation Index (PII) of 0.4. BAS 800 04 H is classified as EPA Toxicity Category IV for primary dermal irritation.

This study is classified as Acceptable. It does satisfy the guideline requirements for a primary dermal irritation study (OPPTS 870.2500; OECD 404) in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

INDIVIDUAL SKIN IRRITATION SCORES

ERYTHEMA/EDEMA

Animal No.	Sex	Hours After Patch Removal				
		0	1	24	48	72
476	F	2/0	1/0	1/0	0/0	0/0
454	M	2/0	2/0	0/0	0/0	0/0
455	M	2/0	1/0	0/0	0/0	0/0
Severity of Irritation - Mean Score		2.0	1.3	0.3	0.0	0.0

A. **Observations:** Well defined erythema (grade 2) was noted on 3/3 rabbits immediately after patch removal. Very slight erythema (grade 1) was noted on 2/3 rabbits one hour after patch removal with clearance on one rabbit by 24 hours and on another rabbit by 48 hours. Well defined erythema was noted on 1/3 rabbits one hour after patch removal with clearance by 24 hours.

B. **Results:** BAS 800 04 H was slightly irritating. The Primary Irritation Index (PII) is 0.4 (calculated by the reviewer).

C. **Reviewer's conclusions:** The study author stated that the test material "does not show a skin irritation potential under the test conditions chosen." This reviewer disagrees with the study author and classifies the test material as slightly irritating.

Primary Reviewer: Susan Change, M.S., ORNL **Date: June 21, 2008**
Secondary Reviewer: Rick Whiting, EPA
Risk Manager (EPA): 23

STUDY TYPE: Dermal Sensitization – guinea pig; OPPTS 870.2600; OECD 406

TEST MATERIAL: BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

CITATION: Landsiedel, R. (2007) BAS 800 04 H – Modified Buehler Test (9 inductions) in Guinea pigs. Report Nos. 33H0175/062292 and BASF Registration Document No. 2007/1053322. Experimental Toxicology and Ecology, BASF Aktiengesellschaft, 67056 Ludwigshafen, Germany. December 6, 2007. MRID 47128411.

SPONSOR: BASF Aktiengesellschaft, GV/TA-Z470, 67056 Ludwigshafen, Germany

EXECUTIVE SUMMARY: In a dermal sensitization study (MRID 47128411) with BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1), 30 male young adult Dunkin Hartley Crl:HA guinea pigs (age: 5-8 weeks; body weight: 384-432 g; source: Charles River Laboratories, Research Models and Services, Germany GmbH, Stolzenseeweg 32 -36, 88353 Kisslegg) were tested using the modified Buehler Method. The test animals were induced with 0.5 mL of undiluted test material absorbed onto 2 cm x 2 cm gauze patches for six hours. The patches were covered with occlusive dressing. The procedure was repeated three times each week on alternative days for three consecutive weeks. Reactions were scored 24 hours after the beginning of application. Thirteen days after the last induction, the test animals were challenged for six hours with 0.5 mL of undiluted test material under occlusion to naive sites. The naive control animals were treated with 0.5 mL of undiluted test material under occlusion for six hours at challenge. Reactions were scored 24 and 48 hours after removal of the patch.

Discrete or patchy to moderate and confluent erythema was noted on 17/20 test animals over the course of nine inductions. Discrete or patchy erythema was noted on 2/20 animals 24 hours after removal of the challenge patch with clearance on one animal by 48 hours. The naive control animals had no dermal irritation after challenge.

Based on the results of this study, BAS 800 04 H was not dermal sensitizer.

This study is classified as Acceptable. It does satisfy the guideline requirements for a dermal sensitization study (OPPTS 870.2600; OECD 406) in the guinea pigs.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

PROCEDURE:

A. **Induction**: The animals were induced and challenged according to the modified Buehler method. The flank areas of 20 test guinea pigs were clipped twice per week during induction phase and once before challenge. For induction, 0.5 mL of undiluted test material was applied to the animal using a 2 cm x 2 cm gauze patch absorbed with the test material and covered with occlusive dressing. The covering was removed after six hours and excess test material removed. The procedure was repeated three times each week on alternative days for three consecutive weeks. Reactions were scored 24 hours after the beginning of application.

B. **Challenge**: Thirteen days after the ninth induction, the test animals were challenged with 0.5 mL of undiluted test material under occlusion to naive sites for 6 hours. Reactions were scored 24 and 48 hours after patch removal.

C. **Naive control:** The dorsal flank areas of 10 naive control animals were clipped prior to treatment. At challenge, the naive control group was treated with 0.5 mL of undiluted test material for 6 hours. Reactions were scored 24 and 48 hours after patch removal.

RESULTS and DISCUSSION:

A. **Reactions and durations**: Discrete or patchy to moderate and confluent erythema was noted on 17/20 test animals over the course of nine inductions. Discrete or patchy erythema was noted on 2/20 animals 24 hours after removal of the challenge patch with clearance on one animal by 48 hours. The naive control animals had no dermal irritation after challenge.

B. **Positive control**: The report included the results of a positive control (alpha-hexylcinnamaldehyde) study conducted within six months of the current study; the results were appropriate.

C. **Reviewer's conclusion**: TRB agrees with the study author that the test material is not a dermal sensitizer.

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D349944
2. **PC CODE:** 118203
3. **CURRENT DATE:** 24/JUL/2009
4. **TEST MATERIAL:** BAS 800 04 H (348.4 g/L BAS 800 H; Batch No. 403006, BASF – Test Substance No. 06/0175-1; white to beige liquid, density 1.150 g/mL)

Study/Species/Lab Study # /Date	MRID	Results	Tox. Cat.	Core Grade
Acute oral toxicity / rat Austrian Research Centers GmbH – ARC 10A0175/069086 and BAS21 November 5, 2007	47128406	LD_{50} > 2000 mg/kg (females)	III	A
Acute dermal toxicity / rat Austrian Research Centers GmbH – ARC 11A0175/069087 and BAS22 November 5, 2007	47128407	LD_{50} > 5000 mg/kg (males and females)	IV	A
Acute inhalation toxicity / rat Experimental Toxicology & Ecology 13I0175/067017 December 18, 2007	47128408	LC_{50} > 5.5 mg/L (males and females)	IV	A
Primary eye irritation / rabbit Experimental Toxicology & Ecology 11H0175/062291 December 6, 2007	47128409	Mildly irritating	III	A
Primary dermal irritation / rabbit Experimental Toxicology & Ecology 18H0175/062290 December 6, 2007	47128410	Slightly irritating	IV	A
Dermal sensitization / guinea pig Experimental Toxicology & Ecology 33H0175/062292 December 6, 2007	47128411	Negative	---	A

Core Grade Key: A =Acceptable, S = Supplementary, U = Unacceptable, W = Waived